

REMARKS/ARGUMENTS

Applicants thank Examiner Hines for the courtesy of an interview extended to Applicants' representative on February 3, 2009. During the interview Applicants claims as well as intake valve cleanliness and combustion chamber deposits data were discussed. During the interview the Examiner asserted that the claims needed to be more specific and commensurate in scope with the data presented to be considered for allowance. Additionally, the Examiner noted that *method* claims of use gasoline additive(s) in an engine would be considered commensurate in scope.

Claims Status

Claims 21-35 are pending. Claims 1-20 are canceled without prejudice. Claims 21-35 are added. New claim 21 finds support in the specification at page 1, lines 4-6, as well as the Schwahn Declaration. New claim 22 finds support in the specification: page 3, lines 1-4. New claim 23 finds support in "GF 3" of the examples of the specification. New claim 24 finds support in the specification: page 8, lines 1-5. New claims 25-29 find support in the Schwahn Declaration as well as the specification generally. New claim 30 finds support in the specification: page 3, lines 15-17. New claim 31 finds support in the specification: page 3, lines 11-13. New claim 32 finds support in the specification: page 3, lines 19-21. New claim 33 finds support in the specification: page 3, lines 23-25. New claim 34 finds support in the specification: page 3, lines 27-29. New claim 35 finds support in the specification: page 3, lines 31-34. No new matter is believed to have been added.

§112/§101 Rejections

Claims 17, 19 and 20 are rejected as failing to recite any “steps involved in the method/process.” As these claims have been canceled and all currently pending claims positively recite active “steps,” Applicants request withdrawal of these rejections.

§103(a) Rejection

Claims 1-20 are rejected under 35 U.S.C. §103(a) as obvious in view of *Schwahn* (US 2003/0140552). Applicants respectfully traverse this rejection with respect to the new claims.

The claimed invention relates to a process of reducing intake valve deposits in a gasoline engine. Carburetors and intake systems of gasoline engines, and also injection systems for fuel metering, are contaminated to an increasing degree by impurities which are caused by dust particles from the air, uncombusted hydrocarbon residues from the combustion chamber, and crankcase vent gases conducted into the carburetor. These residues shift the air-fuel ratio when idling and in the lower partial load range, so that the mixture becomes leaner, the combustion more incomplete, and in turn the proportions of uncombusted or partially combusted hydrocarbons in the exhaust gas become higher and the gasoline consumption increases. It is known that these disadvantages can be prevented by using fuel additives to keep valves and carburetors or injection systems of gasoline engines clean.

Accordingly, it has been desired to find a more effective gasoline fuel-gasoline fuel additive composition; in particular, to find more effective additive formulations. Applicants have found that this can be achieved by adding to a gasoline fuel containing ethanol, a gasoline fuel additive comprising an additive selected from the group consisting of

polyisobutenamine, polyethylamine, polyisobutene succinamide, and a product obtained by Mannich conversion of substituted phenyl with aldehyde and amine.

Furthermore, not only have Applicants discovered a more effective gasoline fuel additive but they have also discovered that particular combinations of additives and lower monoalcohols have a “synergistic effect” on the reduction of intake valve deposits and combustion chamber deposits (see Schwahn Declaration, bottom of page 2).

As MPEP 716.02(a)(I) explains, greater than expected results (e.g., synergism) are evidence of non-obviousness. Additionally, the court of *In re Corkill*, 711 F.2d 1496, 226 USPQ 1005 (Fed. Cir. 1985) (see again MPEP 716.02(a)(I)) held that a claimed combination showing an additive result when a diminished result would have been expected was non-obvious even though the result was equal to that of one component alone. The court also held that evidence of a greater than expected result may also be shown by demonstrating an effect which is greater than the sum of each of the effects taken separately (i.e., demonstrating “synergism”).

With this in mind, Applicants point out the bar graph on page 3 of the Schwahn Declaration (submitted herewith) concerning intake valve cleanliness. This graph shows that addition of ethanol alone (“base runs”) increases deposits (i.e., from 157 to 193 mg/valve), whereas the addition of ethanol in combination with one of the particular claimed additives results in decreased deposits (i.e., from 31 to 4, from 33 to 3, and from 19 to 0 mg/valve). Accordingly and similar to *In re Corkill*, the claimed combination shows an additive result (i.e., increased reduction of deposits / decreased deposits) when a diminished result (i.e., decreased reduction of deposits / increased deposits) would have been expected. Therefore, just as the case was for *In re Corkill*, the claimed combination of ethanol and specific additives in specific amounts is non-obvious.

Furthermore, Applicants submit that such 10-fold or greater reduction in intake valve deposits (i.e., 31 → 4, 33 → 3, and 19 → 0) are of a significant and practical advantage in the gasoline engine industry pursuant to *Ex parte The NutraSweet Co.* (19 USPQ2d 1586 (Bd. Pat. App. & Inter. 1991)).

Accordingly, Applicants showing of greater than expected results (i.e., intake valve cleanliness) that have both a significant and practical advantage in the art is evidence of non-obviousness in contrast to the Office's allegations of obviousness.


Thus, Applicants submit that *Schwahn* does not render obvious the claimed invention and therefore Applicants request withdrawal of this rejection.

Conclusion

For the reasons discussed above, Applicants submit that all now-pending claims are in condition for allowance. Applicants respectfully request the withdrawal of the rejections and passage of this case to issue.

Respectfully submitted,

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